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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/715,041

**Applicant(s)**

CHENG ET AL.

**Examiner**

Andrew Tank

**Art Unit**

2175

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-5, 8, 9, 23, 24 and 28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 8, 9, 23, 24 and 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The following action is in response to the Amendments filed December 9, 2008. Claim 1 has been directly amended. Claims 1, 3-5, 8-9, 23-24 and 28 are pending and have been considered below.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 3-5, 8-9, and 23-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto et al., "Tele-Handshake through the Internet", IEEE Workshop on Robot and Human Communication, copyright 1996 IEEE, pages 90-95, previously presented as "Hashimoto", in view of Cohen et al. (US 7,036,094), previously presented as "Cohen".

**Claim 1:** Hashimoto discloses a method of communicating physical human interactions over a communications network (page 90 col 2 lines 4-8) comprising:

performing an action on a first model by a first user located at a sending system (page 90 col 2 "Tele-Handshaking System" paragraphs 1 and 2, tactile feedback, Operator A, site A), said first model representing at least a portion of a human body (page 91 Fig. 2), wherein said first model incorporates one or more sensors (page 91 Fig. 2);

detecting portions or locations on the first model to which the first user applied force and an amount of force applied over time by each sensor (page 90 col 2 paragraph 4), each sensor being configured to generate and send data when a force is detected (page 94 col 2 paragraph 5) paragraph, the generated data specifying a time the force was detected, the amount of force detected, and the body part to which force was applied (page 95 Figure 7 shows force applied over time);

collecting and analyzing the data generated by each sensor from the action (page 94 4.2 VIPEC);

encoding the data into one or more messages having an intermediate data format for transmitting the determined action over the communications network to a receiving system (page 91 paragraph 1, page 91 3.1: TCP/IP);

receiving and interpreting the one or more messages by the receiving system to determine the action specified by the one or more messages (page 93 3.3); and

simulating the action by performing said action on a second user at the receiving system using a second model (page 90 "Tele-Handshaking System" paragraph 2), said second model representing at least said portion of said human body (page 91 Fig. 2), wherein said second model incorporates one or more actuators which are activated to simulate the action (page 91 Fig. 2).

While Hashimoto discloses that the portion of a human body is a hand and that the physical contact in question is a handshake, Hashimoto does not explicitly disclose that the portion of a human body includes at least one among a human head, face, back and entire human body, wherein the action of the first user includes at least one of a body movement and a change in

facial expression of the first user; nor does Hashimoto explicitly disclose determining the action intended by said first user. Cohen discloses a system for recognizing behaviors as a combination of gestures identified on various parts of a human body in motion (Abstract lines 1-3). The various gestures include any type of static gestures determined via multiple cameras (col 16 lines 62-63), including body portions such as foot, limb and full body gestures (col 16 lines 65-67). The gestures are recorded and compared by a behavior program to identify what type of behavior is being presented (col 23 lines 43-47). Therefore, it would have been obvious to one having ordinary skill in the art and the teachings of Hashimoto and Cohen before them at the time the present invention was made, to further expand the physical contact transmission method of Hashimoto to include identification of various actions using different human body portions. One would have been motivated to do this in order to expand the hand-shake action of Hashimoto to further include other actions from other body parts, as suggested by Cohen (col 16 lines 65-67).

**Claim 3:** Hashimoto and Cohen disclose the physical movement transmission and replication method as in claim 1 above, but do not explicitly disclose converting the data to markup language formatted data. However, Hashimoto discloses operating the method using the TCP protocol (page 91 3.1). As is well known in the art, TCP transmission involves sending packets of data each containing a header and the data. Therefore it would have been obvious to one of ordinary skill in the art and having the teachings of Hashimoto and Cohen before them at the time the present invention was made, to implement the computer methods as modules and to convert the data for transmission by separating them into packets and placing an identification header, i.e. marking up the data based on TCP protocol, in order to help differentiate the data

packets being received. One would have been motivated to do this in order to use the standard mark up language for converting the data for TCP transmission, as suggested by Hashimoto (page 91 3.1. “we have selected to use reliable TCP protocol”), thereby avoiding the cost and time involved with developing one’s own mark up language and transmission protocol, when using Internet aware applications.

**Claim 4:** Hashimoto and Cohen disclose the physical movement transmission and replication mark up language method as in claim 3 above, and Hashimoto further discloses identifying the action from the markup language formatted data in the receiving system (page 90 “Tele-Handshaking System” paragraph 4).

**Claim 5:** Hashimoto and Cohen disclose the physical movement transmission and replication mark up language method as in claim 4 above, and Hashimoto further discloses wherein the markup language formatted data specifies at least one actuator movement to be implemented by the receiving system and an amount of force to be applied in the at least one actuator movement (page 90 “Tele-Handshaking System” paragraph 4).

**Claim 8:** Hashimoto and Cohen disclose the physical movement transmission and replication method as in claim 8 above, and Hashimoto further discloses said simulating step further comprising the step of translating the action into instructions for activating at least one actuator (page 91 Fig. 1 on Operator B Site B: “Host Computer – ISA bus - DA”); and activating the at least one actuator in accordance with the instructions (page 91 Fig. 1 on Operator B Site B: “DA – Linear Motion Motors – Handshake Device”).

**Claims 9:** Hashimoto and Cohen disclose the physical movement transmission and replication method as in claim 1 above, and Hashimoto further discloses the method further comprising:

detecting physical contact of the second model by a second user (page 90 col 2 “Tele-Handshaking System” paragraphs 1 and 2, tactile feedback, Operator B, site B), wherein said second model incorporates one or more sensors (page 91 Fig. 2);  
generating data from said sensors specifying the physical contact of the second model (page 90 “Tele-Handshaking System” paragraph 4);  
determining at least one action intended by the second user indicated by the generated data (page 90 “Tele-Handshaking System” paragraph 4);  
transmitting the determined action over a communications network to the sending system (page 91 paragraph 1); and  
simulating the action by performing said action on the first user at the sending system using the first model (page 90 “Tele-Handshaking System” paragraph 2), wherein said first model incorporates one or more actuators (page 91 Fig. 2).

**Claim 23:** Hashimoto and Cohen disclose the physical movement transmission and replication method as in claim 1 above, and Hashimoto further discloses wherein said generated data specifies a time when a force was detected (page 95 Fig. 7 Operator force, x-axis = time in seconds), amount of said force (page 95 Fig. 7 Operator force, y-axis = force in Newtons), and a location on said human body to which said force was applied (page 95 Fig. 7 Tele-handshake test result, hand).

**Claim 24:** Hashimoto and Cohen disclose the physical movement transmission and replication method as in claim 1 above, and Hashimoto further discloses wherein said action intended by said first user includes at least one among a handshake, an embrace, and a pat on the back (page 90 “Tele-Handshake through the Internet”).

4. **Claim 28** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto and Cohen as applied to claims 1, 10, and 13 above, and further in view of Oakley, I. and O'Modhrain, S., "Contact IM: Exploring asynchronous touch over distance," *Proceedings of CSCW*, New Orleans, USA, 16-20 November 2002, hereafter known as "Oakley".

**Claim 28:** Hashimoto and Cohen disclose the physical movement transmission and replication method and computer-readable medium as in claim 1 above, wherein human actions are interpreted as behaviors by a physical model and transmitted over a network to be actuated by another physical model. Hashimoto and Cohen do not explicitly disclose providing a graphical user interface, within said graphical user interface said first user can select human actions or processing tasks, wherein said human actions include at least one among "touch the face", "touch arm", and "embrace" and said processing tasks include at least one of "opening an audio channel" and "opening a video channel". Oakley discloses an Instant Messaging system wherein haptic effects can be selected by a first user and conveyed via communication network to a second user (page 1: paragraph 1, paragraph 9). Specifically, Oakley discloses a user selecting, via a GUI, the recipient of a haptic message and/or audio or text message (page 2 paragraph 4). Therefore, it would have been obvious to one having ordinary skill in the art and the teachings of Hashimoto, Cohen and Oakley, to combine the GUI for selecting and transmitting haptic actions and processing tasks as taught by Oakley, with the physical movement transmission method of Hashimoto and Cohen, to yield a graphical user interface for selecting human actions and processing tasks such as opening a video or audio channel. One would have been motivated to



do this in order to provide an asynchronous instant messaging client with physical movement actuation, as suggested by Oakley (page 1 paragraph 1).

***Response to Arguments***

5. Applicant's arguments filed December 9, 2008, have been fully considered but they are not persuasive.

Applicant argues, on page 9, that Hashimoto does not disclose that the human body part represented by the first model can be a human head, a human face, a human back or an entire human body and that it is not necessary for Hashimoto to determine one intended action from the data generated by the sensors and transmit the intended action the receiving system. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The above limitations are suggested by the combination of Hashimoto and Cohen, as shown in the rejection of claim 1 above.

Applicant further argues, on page 9, that Hashimoto does not disclose that the action of the first user includes at least one of a body movement of the first user and a change in facial expression of the first user. The Examiner notes that the limitation includes the language "at least one of" suggesting an alternative limitation. As Hashimoto does disclose that the action includes a body movement of the first user (handshake), the limitation is met by Hashimoto.

Applicant argues, on page 9, regarding the newly amended limitations is not persuasive as the newly amended claim is still obvious over Hashimoto in view of Cohen, as shown in the rejection of amended claim 1 above.

Applicant argues, on page 10, that Cohen does make up for the deficiencies of Hashimoto. In particular, Applicant argues that as Cohen is drawn to behavior recognition using static gestures, they cannot teach or suggest a portion of a human body of a model upon which an action can be performed. The Examiner respectfully disagrees. Cohen is used to expand the actions of Hashimoto to include a variety of actions which are determined from data gathered from sensors. Even static gestures, when determined and interpreted by Cohen, can result in determined 'gestures' or actions determined from limbs of a human body. When combined with Hashimoto, the prior art clearly suggests the instant invention.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Tank whose telephone number is 571-270-1692. The examiner can normally be reached on Mon - Thur 0830-1700 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Bashore can be reached on 571-272-4088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. T./  
Examiner, Art Unit 2175  
March 15, 2009

/William L. Bashore/  
Supervisory Patent Examiner, Art Unit 2175